Section 15

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µGy	Micro Gray - x-ray dose 1Gy= 0.87 x 10 -2 J/kg
A / D Converter	**A**nalog **D**igital **C**onverter
ADC	**A**gfa **D**iagnostic **C**enter
Adjustloop	Service Program for mechanical adjustments of the CHM-module - step by step cycle of a 35x43cm IP + Cassette, to define the correct stepper motor steps - controlled by the Service PC
AOS	**A**donis **O**perating **S**ystem Operating system for Agfa CPU's (Gemini, Goliath, David)
APIP	**A**gfa **P**icture **A**rchiving **P**rotocol
AUI	**A**ttachment **U**nit **I**nterface (External „Box“ to connect to a network)
BSP	**B**oot **S**upport **P**ackage: boot program for Agfa CPU's
Calibration	Procedure on ADC to make a homogeneous exposure look like one on film. Algorithm to counter balance irregularities in the scanner of ADC.
CCM	**C**onfiguration and **C**ustomization **M**anager (Tool to edit the configuration file *adc.cpf*)
CHM	**C**assette **H**andling **M**odule
Collimation	Determination of the region in the image where the interesting data is at. On that region the image processing is applied..
Controller	Is connected ahead the laser recorder. The controller is responsible for the image reception from the diagnostic equipment, the image processing, layout of the images on the film, and image transmission to the machine.
CPU	**C**entral **P**rocessing **U**nit. - Microprocessor - board with microprocessor chip.
DAC	**D**igital **A**nalog **C**onverte**r**
DAQ	**D**ata **A**cquisition **B**oard (ADC70)
Dark Current Compensation	Offset for Photomultiplier dark current before scanning the IP. Not used in ADC Digitizer!
Decomposition	The original image is being split up in a set of bandpass-filtered images
Diagnostic Logger	Tool on ADC to keep a lot of reduced images with the corresponding image data on the HD.
DICOM	**D**igital **I**maging and **CO**mmunication in **M**edicine
DIPS	**D**igital **I**mage **P**rocessing **S**tation
Dose, x-ray dose	= kV x mA x sec see also µGy = Micro Gray
Dosimeter	Device to measure x-ray dose
DRA	**D**irect **R**emote **A**ccess (external product name: AGFATEC LINK)
Dynamic Range	Exposure range in which ADC can get usable image data.
Ethernet	Frequently spread technologies for LANs (Local Area Networks)
FOI	**F**ibre **O**ptic **I**nterface. Digital interface for the transmission of image and control data via a light-leading fibre.
FSE	**F**ield **S**ervice **E**ngineer

FTP	**F**ile **T**ransfer **P**rotocol. The Internet service that transfers files from one computer to another. (Program used for transmission of files in the Internet)
GUI	**G**raphical **U**ser **I**nterface (V)DIPS
GSC	**G**lobal **S**upport **C**enter
Gemini	CPU of VME
Grid	- to reduce scattered radiation - to increase sharpness
Heel Effect	inhomogeneous exposure
HeNe Laser	**He**lium **Ne**on Laser
HIS	**H**ospital **I**nformation **S**ystem
Histogram	graphical display of the distribution of gray levels
HT power supply	**H**igh **T**ension power supply
HUB (in AGFA devices)	Switchbox (Hard- or Software) which switches or multiplexes different channels, e.g. AMDI and Service Channel.
HUB (Ethernet)	box to interconnect network hosts with Twisted Pair cable. Also called concentrator.
I/O BUS	**I**nput / **O**utput **BUS**. System consisting of a defined cable, cable connection, and signal for the parallel transmission of control data. The machine uses a bus system of 8 V level and 26 parallel lines.
ID Station	**ID**ENTIFICATION Station
IMOS	**I**MAGE **MO**NITOR **S**OFTWARE --> succession for SMA
Internet	The global computer network, composed of thousands of Wide Area Networks (WANs) and Local Area Networks (LANs), that uses TCP/IP to provide world-wide communication to homes, schools, businesses, and governments. The World Wide Web runs on the Internet.
IP	for ADC: **I**mage **P**late (phosphor plate)
IP	(Internet Protocol) Internet software that divides data into packets for transmission over the Internet. Computers must run IP to communicate across the Internet. See also TCP.
IP-Address	(Internet Protocol Address) The standard method which identifies an internet connected computer.
Java	A general-purpose programming language created by Sun Microsystems. Java can be used to create Java applets. A Java program is downloaded from the Web server and interpreted by a program running on the machine containing the Web browser.
Java applet	A short program written in Java that is attached to a World Wide Web page and executed by the browser machine.
JavaScript	A cross-platform, World Wide Web scripting language developed by Netscape Communications. JavaScript code is inserted directly into the HTML page.
LAN	**L**ocal **A**rea **N**etwork. Network technology, designed to connect computers over short distances. It is possible to connect the LAN with the Internet or to make a configuration into an intranet.
Laser	**L**ight **A**mplification by **S**timulated **E**mission of **R**adiation: The helium neon laser emits red light of a wavelength of 633 nm. High voltage applied at the laser activates the electrons of the helium to provide a strong, coherent, monochromatic light beam.
Leeds Phantom	Image Plate to check the technical image quality of the ADC. The Leeds Phantom was developed for Agfa by the University of Leeds.

Low Pass Filtering	Butterworth filter in SAB - board to eliminate frequencies > 250 kHz.
LUT	**L**ook **U**p **T**able
MAU	**M**edium **A**ttachment **U**nit; physical adaptation between transmission medium and transceiver cable.
MD - Plate	AGFA MD -> **M**edium **D**efinition Image Plate
MFA	**M**achine **F**actor **A** - Machine specific value indicating the photo multiplier sensitivity - MFA is the log of the PM high voltage which results in a scan average level SAL1800 at a given dose of 1mR (~20 μGy) and a speed class 200
MFB	**M**achine **F**actor **B**
MODEM	**MO**DULATOR **DEM**ODULATOR – device to connect via telephone line to another computer.
Monitor - level	- lowest software level on CPU (like BIOS on DOS systems) - stored on EEPROM
mR	**m**illi **R**öntgen, measure for x-ray dose - 1 mR corres. 8.7 uGy
MUSICA	**MU**LTIPLE **S**cale **I**mage **C**ontrast **A**mplification (Agfa Image Processing)
Network location	In an URL, the unique name that identifies an Internet server. A network location has two or more parts, separated by periods, as in my.network.location. Also called host name and Internet address.
Node	Nodes in the I/O bus system = printed circuit board in the I/O bus.
Nullmodem	RS 232 (RS242) cable with crossed Transmit / Receive Line
OLUT	**O**utput **L**ook-**U**p **T**able
Opto switch	- optical sensor interrupted by the rotating shutter - generates the trigger signal for the IDS synchronisation
Password	A text string that allows a user access to an Internet service, if the service requires it.
PD-Factor	**P**in **D**iode factor (mW/V) The Pin diodes are used for indirect measuring of the laser power. Due to the fact that not all diodes have the same sensitivity, a device specific constant, the pd_factor, has to be determined. The measured Pin diode signal multiplied with the pd_factor results in the laser power. Formula: pd-signal (V) x pd_factor (mW/V) = Laser power (mW)
Photomultiplier (Tube)	opto - electronical sensitive device to convert light (laser emmision) in current and with a I / V -Converter into voltage
Pixel	Scanning point on the film or plate. A maximum of 2048 per line may be read by the Photomultiplier.
PMT	**P**hoto **M**ultiplier **T**ube
Preview Monitor	displays the image and the name of the patient. This monitor enables to roughly check whether the exposure was successful.
PRID	**PR**EVIEW and **ID** Station, installed on one PC
PS	**P**rocessing **S**tation
Pyramidal Image	Image file format of images on (V)DIPS
Quantisation	compression of image files

RAM	**R**andom **A**ccess **M**emory volatile main memory of computers
RAM - DISK	- virtual harddisk simulated in the CPU main memory - Gemini RAM-Disk contains all the machine dependent parameters, e.g. stepper motor steps, info counters
REM Tool	Debugging tool for AOS logfiles
Reset	Machine reset into a defined machine status. Various checking routines are carried out during a reset.
RIS	**R**adiology **I**nformation **S**ystem
RMS	Rotating Shutter Motor Driver Board
ROM	**R**ead **O**nly **M**emory
RS	**R**otating **S**hutter - Stepper motor driven blade which interrupts the laser beam (Chopper) - switching the opto switch light barrier
RS232 interface	Serial interface which converts computer internal parallel information into serial bits, and vice versa.
SAB	**S**can **A**cquisition **B**oard
SAL	**S**can **A**verage **L**evel - Digitized photo multiplier signal of an average of several hundred scanned lines - Range SAL0 – SAL4095 (12bit)
SCB	**S**can **C**ontrol **B**oard
SCP	**S**OFT**C**O**P**Y Tool
SCSI	**S**mall **C**omputer **S**ystems **I**nterface – interface to connect peipherals to computers (e.g. HDD, CD-ROM)
Service interface	RS232 standard interfae for the connection of the Service PC.
Shell	User Interface of the VME - AOS
Speed Class (SC)	Dose=1mR + SC100 => D=1 above fog + base A film-screen-system with speed class 100 which is exposed with a dose of 1mR results in a density 1 above fog+base.
Square Root Compression	Signal ~ $\sqrt{N}$. Method to quantisize Signal in 12 similar block sizes
TCP	**T**ransmission **C**ontrol **P**rotocol. Internet networking software that controls the transmission of packets of data over the Internet. Among its tasks, TCP checks for lost packets, puts the data from multiple packets into the correct order, and requests that missing or damaged packets be resent. Computers must run TCP to communicate with World Wide Web servers.
TCP/IP	**T**ransport **C**ontrol **P**rotocol / **I**nternet **P**rotocol. Common Protocol for Networks. Used in the Internet
Testsheet	Image plate with testpattern, print to check the geometric qualtity of ADC:
Text Field	Part of the film displaying patient, hospital and image processing information

UI	**U**ser **I**nterface (PRID, (V)DIPS)
UPS	**U**ninterruptable **P**ower **S**upply
UTP - cable	**U**nshielded **T**wisted **P**air (Network transfer medium) cable. Cable to connect to a computer network.
VGA - Board / Monitor	**V**ideo **G**raphics **A**dapter
VIPS	**V**iewing and **I**mage **P**rocessing **S**tation
VME bus	**V**ersa **M**odule **E**urope **bus** Bus system from Motorola (used in ADC Digitizers) Bus for the parallel image data transmission. 16 bit bus.
W/L	**W**indow and **L**eveling of digital images.
WS	**W**ork **S**tation, based on UNIX
X-Rite densitometer	Automatic density measuring instrument manufactured by X-Rite.